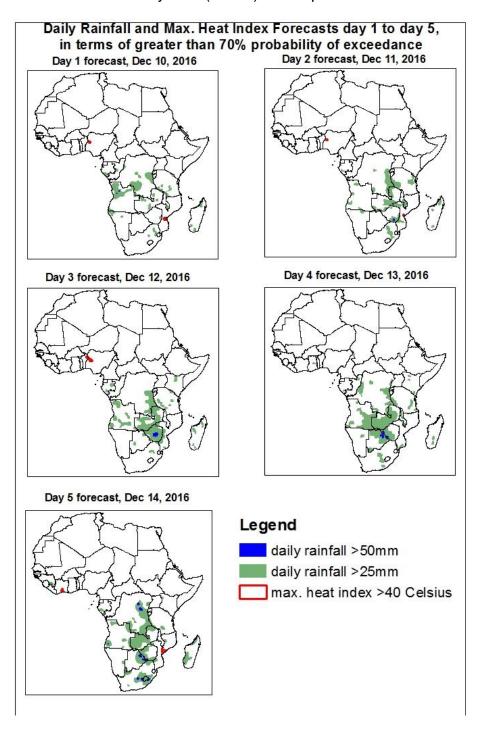
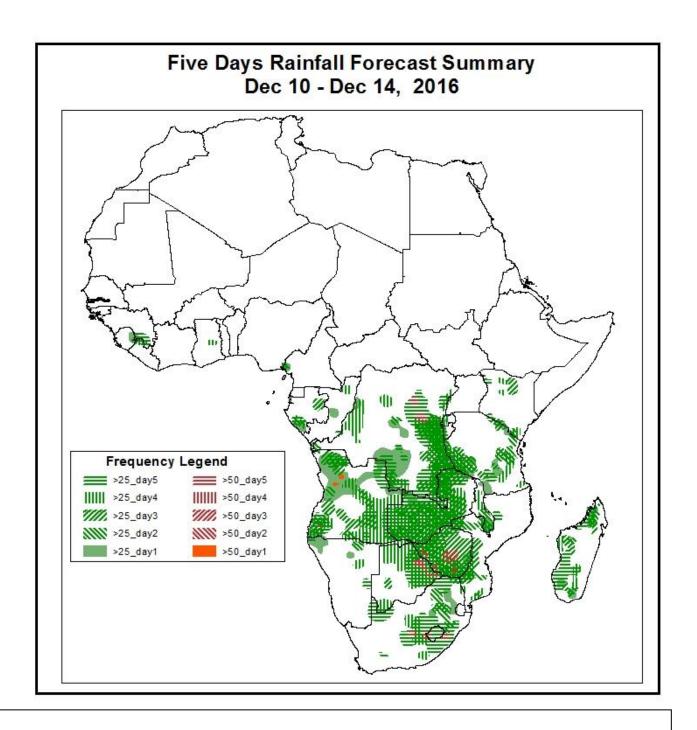
## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Dec 09, 2016)

# 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Dec 10 – Dec 14, 2016)

The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.

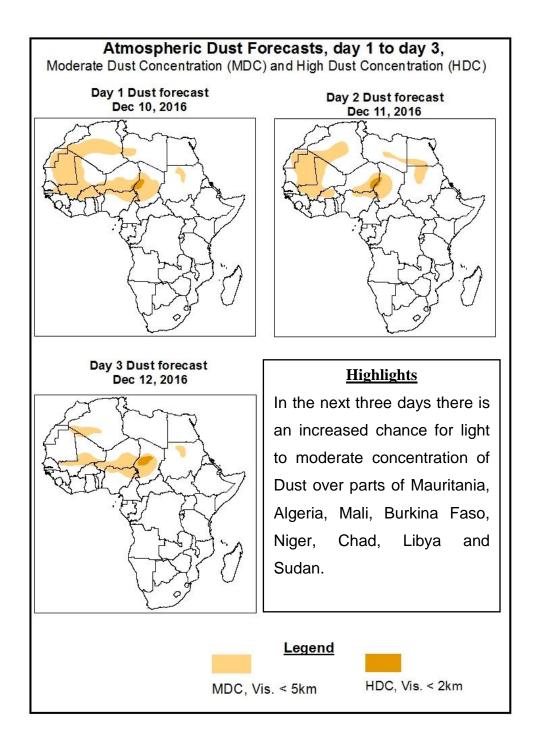




# **Highlights**

In the next five days, lower level wind convergences across the Northern parts of the South African countries are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of light to moderate rainfall over portion of Zambia and Zimbabwe, local area of Gabon, DRC, Angola, Tanzania, Malawi, Botswana, South Africa, Lesotho and Madagascar.

# **1.2. Atmospheric Dust Concentration Forecasts** (valid: Dec 10 – Dec 12, 2016) The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



#### 1.3. Model Discussion, Valid: Dec 10 – Dec 14, 2016

The Sub-Tropical High Pressure system over the Libya is expected to weaken, with its value of the central pressure decreasing from 1027hPa to 1021hPa in the next 96 hours, intensify to 1026hPa during the remaining forecast period.

The St. Helena High Pressure system over the Southeast of the Atlantic Ocean is expected to intensify, with its value of the central pressure increasing from 1021hPa to 1025hPa in the next 48 hours, weaken to 1020hPa during the remaining forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify, with its value of the central pressure increasing from 1028hPa to 1030hPa in the next 48 hours, weaken to 1027hPa during the remaining forecast period.

At 925hPa, strong dry Northerly to Easterly winds may lead from light to moderate dust concentration over parts of Morocco, Mauritania, Algeria, Libya, Senegal, Mali, Burkina Faso, Niger, Chad, Northern Nigeria, Sudan and Egypt.

At 850hPa level, lower level wind convergences are expected to prevail over CAR, DRC, Angola, Namibia, Zambia, Botswana, South Africa, South Sudan and Ethiopia.

In the next five days, lower level wind convergences across the Northern parts of the South African countries are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of light to moderate rainfall over portion of Zambia and Zimbabwe, local area of Gabon, DRC, Angola, Tanzania, Malawi, Botswana, South Africa, Lesotho and Madagascar.

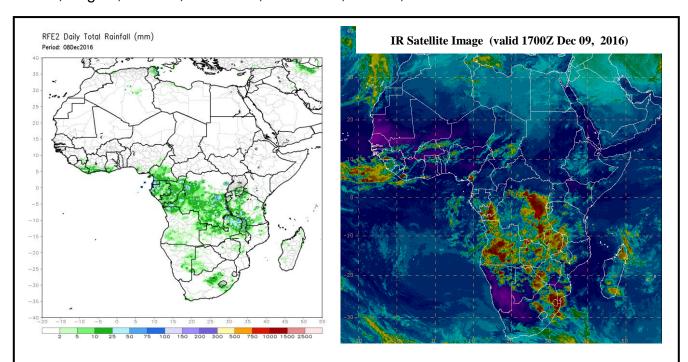
# 2.0. Previous and Current Day Weather over Africa

# 2.1. Weather assessment for the previous day (Dec 08, 2016)

Light to moderate rainfall was observed over portion of Tunisia, Cote d'Ivoire, Equatorial Guinea, Gabon, Congo, DRC, Angola, Zambia and Tanzania.

## 2.2. Weather assessment for the current day (Dec 09, 2016)

Intense convective clouds are observed over portions of Guinea, Liberia, Cameroon, Congo, DRC, Angola, Zambia, Botswana, Zimbabwe, Malawi, South Africa and Swaziland.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (right) based on IR Satellite image.

**Authors: Wasiu Ibrahim & Edward Andrew** (Nigeria/S.Sudan-Meteo) / CPC-African Desk); wasiu.ibrahim@noaa.gov edward.okeiyg@noaa.gov